

# Notice of Allowability

Application No.

10/651,131

Examiner

Vikansha S. Dwivedi

Applicant(s)

HIBINO ET AL.

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/21/2006.
2. ☒ The allowed claim(s) is/are 1-3, 5-7, 11, 15, 16, 18, 24, 25 (As presented by the examiner).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

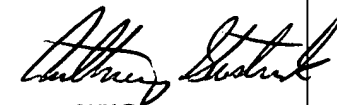
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|  | 9. <input type="checkbox"/> Other _____   |

  
**ANTHONY D. STASHICK**  
**PRIMARY EXAMINER**

***Office Action Introduction***

This office action is in response to the amendments of 8/21/2006. Claims 1-3, 5-7, 11, 15, 16, 18, 24 and 25 are allowed.

***Response to Amendment***

In response to the remarks made with respect to Claims 5-7 and 11, the amendments made to Claim 5 makes the claim fall in the elected species group and is in accordance with the election /restriction requirement.

***Allowable Subject Matter***

Claims 1-3, 5-7, 11, 15, 16, 18, 24 and 25 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

A swash plate type variable displacement compressor connected to an external drive source for compressing refrigerant gas that contains lubricating oil comprising:

- a cylinder block defining a cylinder bore;
- a housing fixed to the cylinder block, the housing defining a crank chamber, a suction chamber and a discharge chamber;
- a drive shaft supported by the housing and the cylinder block for rotation, the drive shaft being driven by the external drive source, the drive shaft having an axis;
- a swash plate supported by the drive shaft in the crank chamber so as to rotate integrally with the drive shaft, the swash plate being inclinable with respect to the axis of the drive shaft, an inclination angle of the swash plate being varied in accordance with the pressure in the crank chamber;

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a piston accommodated in the cylinder bore so as to define a compression chamber in the cylinder bore, the piston being coupled to the swash plate, the rotation of the swash plate being converted into the reciprocating movement of the piston, displacement of the compressor being varied by the reciprocation of the piston in accordance with the inclination angle of the swash plate;

a control mechanism for controlling pressure in the crank chamber, the control mechanism including a bleed passage that interconnects the crank chamber with the suction chamber for decreasing the pressure in the crank chamber; and

a communication path for interconnecting the crank chamber with the compression chamber only while the inclination angle of the swash plate is substantially the maximum inclination angle and the piston is located substantially at its bottom dead center.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikansha S. Dwivedi whose telephone number is 571-272-7834. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
VSD

  
ANTHONY D. STASHICK  
PRIMARY EXAMINER